TARGHEE NATIONAL FOREST

BARK BEETLE CONTROL PROJECT

F.Y. 1967

WORK INSTRUCTIONS AND SPECIFICATIONS

Prepared by: John Kinichelos — Insect Control Officer — 10/10/66 Date

Approved by: [signature] — Timber Staff Officer — 10/10/66 Date

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I. Introduction

On past Targhee insect-control projects, there have been several methods used to accomplish the various types of insect-control work. The different project leaders have not necessarily used the same methods to accomplish the same type of job.

Experience has shown that a lack of standardization leads to a degree of confusion, both with the Forest Service crews and also with contractors. Therefore, the instructions and specifications stated herein are set forth in an effort to minimize such misunderstandings.

Each zone supervisor will conduct their project work according to these instructions and specifications, as nearly as possible. The various treating units will vary as far as conditions are concerned and certain deviations from these instructions may be necessary. However, no deviation should be made unless first cleared with the Insect Control Officer.

II. Spotting Specifications and Instructions for Individual Spotters

A. Each spotter must go at least as close as an arm's length of each tree to look for outside evidence of beetles.

B. Outside evidences of beetles in the tree are as follows:

1. Pitch tubes -

Clear pitch - Either old tubes or weeping pitch caused by other injuries to the tree. No beetles.

Red or brown - (May have a tint of pink color and be mixed with frass.) - New pitch tubes and are soft to the touch. These indicate beetle activity.

White - (May be pink with large globs of pitch) - Pitch-outs and indicates tree has pitched the bugs out.

Old pitch tubes will be hard and dry and are from previous years hits. Do not tag old hit trees unless new hits are evident.

2. Frass - Wood dust on bark of the tree and about the base of the tree. Caused by the beetles boring into and under the bark of the tree and is a sure sign of active bug work.

3. Entrance holes - Sometimes the pitch tubes and frass are very difficult to see about the tree. This is known as a blind attack. In this case there will always be holes where the beetle has entered on successfully attacked trees. They are a sure indication of the presence of beetles. Do not mistake these for emergence holes on trees that the bugs attacked in other years.

4. Fading of faded tree tops - Will be greenish yellow or yellow. More easily seen in the spring. Red tops generally indicate old hits. In either case, the occurrence of faded tops indicate insect activity in the area. Check closely.

5. Woodpecker work - Easily seen and one of the quickest and best ways to determine active beetle work in a tree. Usually seen more readily in the spring.

C. If none of the outside evidence listed above is present, do not chop into the tree. The tree is not infested!

D. If there are fresh pitch tubes which are not pitchouts, and frass, the tree has live bugs. Tag it. Do not chop. Later in the year, faders give additional evidence. However, many green trees have active bugs in them. Look for more evidence than just faders.

E. If there is only a little evidence and doubt exists, peel back the bark with a hatchet and look for inside evidence. Do not girdle the tree! Usually, bugs will be found, if they are present, by checking no more than three spots on the tree. Woodpecker work is an excellent place to look. Inside evidence to look for is:

1. Blue stain - good evidence of bugs.

2. Galleries, niches, and mines - good evidence.

3. Live bugs and/or larvae.

4. Dryness of tree - if fresh and stained, bugs are present. If hard and dry, bugs have left.

5. Pitch in gallery - if pitch has filled 4 inches or more of the gallery, it is a pitchout.

III. Paintlining Specifications

A. Properly lay out area for treatment on a base map, considering the following:

1. Access for goop hauling, personnel, packers, and/or other mechanical equipemnt.

2. Terrain.

3. Mark outside boundary of infestation with yellow paintline or flagging where necessary.

B. A sketch map of each treating unit will be prepared on at least a 4" scale. This map will show the following:

1. Boundaries of unit and sub-units if sub-divided.

2. Paintlines with numbers.

3. Number of trees spotted in each lane.

4. Physical features and section lines and numbers.

The zone supervisor will be responsible for seeing that these maps are prepared for each treating unit. Prepare the original on transparent paper or phastic. Copies can then be made on the blue-ray machine in the S.O. Plastic map sheets are available in the S.O. All units must be approved by Insect Control Officer prior to laying out on the ground.

C. Each treating area will be divided into lanes separated by painted lines. All lines, except outside boundary of unit, will be marked with orange paint instead of string. (Except in travel influence zones)

1. Every painted tree on the line will be marked, as necessary, so that the tree behind and the next tree on the line can be seen from it.

2. In large line openings, the lines will be flagged on bushes at least every chain with orange flagging.

3. Lane widths will be no less than one chain and no more than three chains. Lanes chould average two chains wide.

4. The orange paint marks on the lines will be at least 6 feet high and no more than 8 feet high and on both sides

of the tree facing the direction of the line. These marks will be no more than six inches in diameter. A spot will be used on even numbered lines and a line or slash will be used on odd numbered lines.

5. The beginning and endings of each line will be at a tree marked with an orange flag completely around the tree and the line number written on the beginning or ending line tag.

6. Lines within a subunit will be consecutively numbered with the lane being on the right of the line.

7. Beginnings and endings of each line will be tagged with light colored tags and so marked. Line numbers will also be written on each tag. Wherever the line crosses a road or trail, a tag will be placed on one side of the road or trail and marked with the line number and flagged with orange flagging.

8. No paint will be used on lines ending or beginning on any improved road or highway in the travel influence zone. Strings will be used far enough so that paint will not be visible from the road.

9. All strings, tags, and flagging will be removed at the end of the treating in such areas as specified in item 8 above.

10. Only orange flagging or paint will be used on lines and yellow flagging or paint will be used for marking unit boundaries.

11. No paint is to be used on any object other than is specified.

12. Line tags will be placed along the lines, either by stapling or tying, with the line number on them at intervals of about 5 chains.

IV. Tree Tagging Specifications

1. Trees will be tagged with a colored tag, perforated across the middle, having a printed number on both sections.

2. Blue and mandarin orange tags will be used alternately in alternate lanes.

3. Tags will be stapled with at least two staples in the top half and one in the bottom half of the tag.

4. Tags will be fastened to the side of the tree facing the beginning of the line. A blaze will be made on the side of the tree opposite the tag.

5. The line number will be written on both halves of the tag and the fiscal year of treatment will be written on the blaze (with keel or grease pencil).

6. All spotters, both force account and contract, will mark the number of trees, within each lane, on the appropriate beginning and ending line tags.

7. Tags will be stapled on the trees at least at the DBH height.

V. Treat Standing

1. Trees must be treated to a 4-inch top or as high as the infestation accurs, whichever is lower.

2. Trees which are infested higher than 30 feet will be treated standing as high as possible, then felled, and the remaining infested portion treated on the ground.

3. Stumps must not be higher than 12 inches measured on the average ground level.

4. Trees will be sprayed from the top down to the ground line so that the goop flows down the tree trunk.

5. All limbs on felled trees will be lopped to a 2-inch top and the top severed.

6. Snow will be removed from around all trees to be treated so that the maximum stump height is not exceeded.

7. Cans of goop that have not been moved for some time will be shaken before using.

VI. Fell and Treat

1. All trees will be felled and chemically treated throughly by sprinkling all sides of the infested portions.

2. Tree numbers must be marked on the stump of each felled tree.

3. No road, trail or creek will be left obstructed by felled trees or slash.

4. All slash will be lopped to a two inch top and the top severed.

5. All slash from trees felled within 100 feet of any improved road will be piled in such a manner that the piles can be burned without scorching adjacent live trees.

6. Stumps will not be over 12-inches, above average ground level.

VII. Fell and Burn

1. Slash and stump heights will be handled as outlined in other treating specifications.

2. The bark on all infested portions of all trees felled for burning must be completely burned until consumed. Any bark that is not so burned, may be peeled.

3. Wood bolts will be cut as large as can be practically handled and piled so that chunks will fall into the fire as the inside is consumed.

4. The tree number will be written on the stump.

VIII. Insecticide Mixing

Ethylene dibromide will be mixed as follows:

1. Concentrate - mix pure EDB with diesel oil at:

   3.5 gallons pure EDB
   6.5 gallons diesel oil
   10.0 gallons of EDB concentrate with about 6 lbs. EDB/gallon.

2. Mixed Goop - mix EDB concentrate with diesel oil at:

   1 gallon of EDB concentrate
   19 gallons of diesel oil
   20 gallons of mixed goop with about .3 lbs. EDB/gallon.

NOTE - Pure EDB weighs 18 lbs./gallon.